

**REMARKS**

Entry of the present after-final amendment is respectfully requested because the amendments and conjunction with the arguments below are believed to place the application in condition of allowance or at least in better form for appeal without requiring a new search by the examiner.

Claims 28-35 are canceled without prejudice or disclaimer. Claim 36 is amended herein to be in independent form including the limitations of claim 12 and to clarify differences between the bandwidths, input signal(s) and output signal(s) regarding the multiplexer and the demultiplexer by specifying them in terms of forward and return. New claims 37-44 are presented for examination which correspond to canceled claims 28-35 and are dependent upon amended claim 36. The examiner indicated that claim 36 would be allowable if rewritten in independent form including the limitations of claims of independent claim 12. Accordingly, claims 36-44 should be in condition for allowance.

Claims 1 and 20 were objected to due to informalities. Particularly, the examiner has stated that it is unclear what is meant by “greater than or less than.” The claim previously recited “outside of,” to which the examiner objected to and suggested “greater than, less than.” (See Office Action dated 19 April 2007). Although the applicants disagreed with the examiner’s objection, the applicants amended claims 1 and 20 in the previous response to adopt the examiner’s suggestion. Particularly, as discussed in the example on, for example, paragraph [0028], the 10 filters 208 each serve as bandpass filters that decrease signals outside the following respective frequency ranges starting with the top filter: 0-100 MHz, 100-200 MHz, 200-300 MHz, 300-400 MHz, 400-500 MHz, 500-600 MHz, 600-700 MHz, 700-800 MHz, 800-900 MHz, and 900-1000 MHz. Particularly, signals not within the recited second bandwidth are

decreased. For example, a 100-200 MHz would decrease a signal having a 202 MHz bandwidth (greater than) or a signal having a 98 MHz bandwidth (less than). If the examiner chooses to maintain this objection, a further suggested amendment would be appreciated.

Regarding pending claims 1-27, the applicants respectfully request that the examiner reconsider the final rejection of these claims for the reasons discussed below.

Claims 1-3 and 5-33 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,016,242 to Tang. The applicants respectfully request that this rejection be withdrawn for the following reasons.

Regarding claims 1 and 12, Tang fails to disclose generating an output signal comprising a first bandwidth from a plurality of input signals comprising bandwidths less than the first bandwidth and replicating the input signals comprising a third bandwidth that is a multiple of the second bandwidth to generate a number of replicated signals corresponding to the multiple.

In the section entitled “Response to Arguments,” the examiner asserted that claims 1, 12, 20 and 27 do not relate an output signal’s bandwidth to any of the bandwidths claimed. However, the preamble of claim 1 recites: “A method of generating an output signal comprising a first bandwidth from a plurality of input signals comprising bandwidths less than the first bandwidth.” That is, the preamble of claim 1, as well as claims 12, 20 and 27 *clearly* relate the bandwidth of the output signal(s) to the bandwidth of the input signal(s). The preamble should be given patentable weight since it recites limitations and breaths life into the claim.

The examiner has pointed to the output of the multiplexer shown in Fig. 3 as disclosing the output signal in question. However, as discussed previously, Tan describes that the output signal carries twenty-one digital channels spaced at 200 MHz intervals from 1.9 GHz to 5.9 GHz, thus an outputs signal having a bandwidth of 4 GHz. (See Col. 6, Lines 3 - 9). It is difficult to

compare this 4 GHz signal with an input signal of Tan, because the examiner has not clearly stated which portion or signal in Tan discloses the input signal. However, on one hand, the input signal to the 4-way power divider has a spectrum of 100 MHz to 7 GHz, thus a bandwidth of 6.9 GHz which is clearly larger than the output signal having a bandwidth of 4 GHz.

Returning to the limitation of: “replicating the input signals comprising a third bandwidth that is a multiple of the second bandwidth to generate a number of replicated signals corresponding to the multiple,” the examiner asserted that “Fig. 2 depicts splitting or dividing or replicating a signal A, the result of filtering, comprising a 3<sup>rd</sup> bandwidth where that third BW is the same as the first BW, and every number is a multiple of itself.” Fig. 2 does show a 5-way power splitter 62 that divides and distributes the spectrum from amplifier 50. However, the output of amplifier 50 is a spectrum from 1.9 - 2.7 GHz, thus a bandwidth of approximately 0.8 GHz (See Col. 4, Lines 63 - 65). Assuming *arguendo* that the output of the splitter 62 has a spectrum similar to the input, the splitter 62 does not generate a *number* of replicated signals corresponding to the *multiple* between the third bandwidth and the second bandwidth. Rather, the splitter generates a number (5) of signals that does not correspond to the multiple (1) between the two bandwidths.

In fact, the examiner’s statement that the bandwidths are the same demonstrates that the splitters in Tang do not disclose this limitation.

Regarding claims 20 and 27, Tang fails to disclose generating a plurality of output signals each comprising first bandwidth in response to an input signal comprising a second bandwidth that is a multiple of the first bandwidth and replicating the input signal into a number of replicated signals corresponding to the multiple.

The portion in which the examiner discusses the rejection of claims 20 and 27 is tailored to the limitations of claims 1 and 12. No discussion of the limitations of claims 20 and 27 is included. Nonetheless, Tang describes that the output of the splitter 62 has a spectrum similar to the input. That is, the splitter 62 does not generate a *number* of replicated signals corresponding to the *multiple* between the first bandwidth and the second bandwidth. Rather, the splitter generates a number (5) of signals that does not correspond to the multiple (1) between the two bandwidths. The same holds true for splitters 71 and 91.

Therefore, claims 1, 12, 20 and 27 and dependent claim 2 - 11, 13 - 19, and 21 - 26 should be withdrawn for at least the above discussed reasons.

It should be noted that a final rejection is not proper when a clear issue between the applicant and the examiner has not yet been developed (See MPEP 706.07 Aug. 2001). As discussed briefly above, the examiner has not specifically stated what portion of Tang discloses the recited input signals, nor has the examiner discussed how Tang discloses the limitations of claims 20 and 27. Therefore, if the examiner chooses to maintain the above rejection, the applicants respectfully request that the examiner withdraw the finality of the rejection and specifically state which portions of Tang disclose the input signal and the limitations of claims 20 and 27.

In view of the foregoing, the applicants submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

If there are any problems with the payment of fees, please charge any underpayments and credit any overpayments to Deposit Account No. 50-1147.

Respectfully submitted,

  
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